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The trade-off between liquidity and correlation: proxy hedging of bunker fuel

Michael Coulon^a, Nina Lange^b and Diana Prinzbach^c

^aDepartment of Business and Management, University of Sussex, UK
`m.coulon@sussex.ac.uk`

^bDepartment of Management Engineering, Technical University of Denmark, Denmark
`nilan@dtu.dk`

^cTechnical University of Munich, Germany
`d.prinzbach@tum.de`

Fuel costs are a substantial component of the shipping industry, making bunker fuel price risk a major consideration for shipping firms. We analyse the hedging effectiveness of different proxy hedges with oil futures as well as OTC forwards for the bunker fuel market. Using different hedge ratios and a VECM-GARCH modeling approach it is found that oil futures' hedging effectiveness has significantly improved over the past 20 years. Despite this improvement, in the minimum-variance framework, the forward contracts' higher correlation still yields better hedging results. However, given the high amount of transaction costs for OTC products, the exchange-traded oil futures contracts can deliver higher mean-variance utilities and can thus be considered a viable candidate when hedging fuel for ships. We explore the tradeoff between liquidity and correlation that dominates this important energy market challenge.